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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,247

10/13/2004

Laimute R Svarcas

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02/18/2010

THE LUBRIZOL CORPORATION
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EXAMINER

VASISTH, VISHAL V

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

02/18/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,247	Applicant(s) SVARCAS ET AL.	
	Examiner VISHAL VASISTH	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicants' response filed on 12/16/2009 amended independent claims 1 and 10-11 and added new dependent claim 12. The amended claims do not overcome the prior art rejection which is discussed below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blythe, US Patent No. 5,264,005 (hereinafter referred to as Blythe) in view of Chamberlin, III, US Patent No. 6,242,394 (hereinafter referred to as Chamberlin).

Blythe discloses a two-cycle lubricant and method of using the same comprising the following components, a major amount of a fuel lubricant mixture (see Abstract)

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from 15 to 70 wt% of a fluidizing oil such as natural or synthetic oils (component (a) of claims 1, 10 and 11) (Col. 27/L. 63-64 and claim 54 of Blythe), the reaction product of isostearic acid and tetraethylene pentamine (component (b-1) of claims 1, 10 and 11 and as recited in claims 4-5) (Col. 22/L. 49-58), a Mannich dispersant which is the reaction product of polypropyl-substituted phenol, formaldehyde and an aqueous dimethylamine solution. It is the position of the examiner that a polybutene-substituted phenol would have been envisaged by one of ordinary skill in the art by the disclosure of Blythe wherein polybutene-substituted phenols were used in preparing the dispersants disclosed in Blythe (Col. 19/L. 34-50) (component (b-2) of claims 1, 10 and 11) (Col. 20-21/L. 58-6).

The composition of Blythe further discloses a Stoddard solvent having a kinematic viscosity of .74-1.65 (cSt) at 100°C (within the range as recited in component (c) of claims 1, 10 and 11) (Col. 30/L. 20-23).

The lubricant composition of Blythe discloses the composition comprising from about 2 to about 15% by weight of the product of a isostearic acid and tetraethylenepentamine (which overlaps with about 2.5 to about 8 wt% as recited in component (b-1) of claims 1, 10 and 11) (Col. 22/L. 36-46 and Col. 28/L. 46-49) and from about 0.5 to about 30% by weight of a Mannich dispersant (which overlaps with about 2.5 to about 8 wt% as recited in component (b-2) of claims 1, 10 and 11-12) which makes the total weight percentage of the two components between 2.5 wt% to 45 wt% (which overlaps with the claimed range of at least about 7.5 wt% as recited in

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claims 1, 10 and 11) even if there are no other dispersants present in the composition (Col. 16/L. 5 and Col. 28/L. 39-45 and Col. 30-31/L. 56-10).

The composition of Blythe further provides that the nitrogen content of the condensation product of isostearic acid and a tetraethylene pentamine is 5.9 wt% (Col. 22/L. 55-58) and the nitrogen content of the Mannich dispersant component of the composition is 0.5 wt% nitrogen (Col. 21/L. 6). Assuming no other nitrogen-containing dispersants and based on the concentrations and molecular weights for the two additives discussed above the lubricant composition would have a total nitrogen content that overlaps the range as recited in claims 1, 10 and 11 of about 0.25 to about 0.75 wt% nitrogen.

Blythe discloses a lubricant composition and fuel-lubricant mixture (Col. 28/L. 16-18) wherein the lubricant composition are used in fuels in amounts to release stuck piston rings or increase compression. The lubricant composition is preferably used at a concentration of 4 ounces per gallon of fuel. Based on a conversion of 128 ounces is equal to 1 gallon the ratio of fuel to lubricant would be within the claimed range 10-250:1, therefore the composition of Blythe comprises a major amount of a liquid fuel composition (as recited in claim 7) (Col. 28/L. 26-38).

The finished lubricant composition of Blythe further includes the use of additives such as dispersants other than the components (b-1) and (b-2) as discussed above which include aminophenols (Col. 3-4/L. 19-56) present from about 5 to about 30% (about 0.5 to about 8 percent by weight of at least one additional dispersant not claimed in claim 1 as recited in claims 2-3) and additional additives such as antioxidants (Col.

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30/L. 46-47). Blythe, however, does not explicitly disclose the amount of an aromatic antioxidant present in the composition or lubricating a direct fuel injection two-cycle engine.

Chamberlin discloses a lubricant composition suitable for fuel injected two-stroke cycle engines and method of using the composition to lubricate a direct fuel injected crankcase two-stroke cycle engine (as recited in claims 8-9) (Claim 20 of Chamberlin) comprising, an aminophenol, a Mannich dispersant, and further additives to formulate a finished composition (see Abstract). The additives include pour point depressants, foam inhibitors and 0.5 wt% of a hindered amine antioxidant such as a commercial mixture of p-nonylphenyl-phenylamine and di-p-nonylphenylamine (which is within the range as recited in component (d) of claims 1, 10 and 11) (Col. 28/L. 14-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the amount of antioxidant in Chamberlin in the composition of Blythe in order to reduce the oxidation of the oils in the composition and a direct fuel injection allows for less accumulation of unused oil in the crankcase which is recirculated throughout the engine (Col. 24-25/L. 33 of Chamberlin).

Response to Arguments

5. Applicants' arguments filed on 12/16/2009 have been fully considered and are not persuasive.

Applicants argue that Blythe in example A-8 teaches a Mannich dispersant that does not read on the instant claims. Applicants filed a Declaration under 37 CFR 1.132

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signed by Ewan Delbridge to further supplement applicants' argument. The examiner is of the position that if the Mannich dispersant of example A-8 in Blythe does not read on instant claims 1 and 10-11, this does not obviate the 35 USC 103 rejection over Blythe in view of Chamberlin because Blythe broadly discloses that the dispersant component is selected from (A-1), (A-2), (A-3), (A-4), (A-5) and (A-6). Dispersant (A-6) is a Mannich dispersant as taught in column 16, lines 5-58. Further, example 8 from table 1 of Blythe was cited by the examiner to show that a combination of dispersants is taught by Blythe, and not for the specific dispersants disclosed therein. Furthermore, Blythe explicitly discloses both ethylenediamine and dimethylamine as polyamines that can be used in reactions to form dispersants. Therefore, it is the position of the examiner that one of ordinary skill in the art at the time of the invention would immediately envisage a Mannich dispersant using ethylenediamine and/or dimethylamine as a polyamine reaction component from the disclosure of Blythe.

Applicants further argued that the present invention demonstrates unexpected results and have provided data in the form of a Declaration by Dr. Patrick Mosier on 12/10/2009 that allegedly supports the applicants' position. However, the examiner maintains the position that the data submitted is still not commensurate in scope with the claims.

Applicants' arguments and example 2 from the table in the Declaration signed by Dr. Mosier do show that the concentration of solvent is not important and therefore this is no longer an issue in the claims. However, independent claims 1, 10 and 11 broadly comprises "(c) 0 to about 45 percent by weight of a combustible solvent..". Additionally,

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applicants have not incorporated the subject matter of claims 5 into independent claims 1 and 10. It is accurate that claim 11 does disclose the specific reaction components for condensation product limitation (b-1); however, all of the independent claims need to be commensurate in scope with the data presented.

Furthermore, applicants did amend independent claims 1 and 10-11 to further reflect the example oils from the specification and those presented in the Declarations. However, applicants still did not show the criticality of the ranges for the dispersants (b-1) and (b-2). The minimum requirement is still well below what is actually reflected in the Declaration and no criticality is actually shown for the ranges selected. This is also the case for the aromatic amine antioxidant component.

Finally, applicants did compare their formulations against the closest prior art namely Blythe, but applicants still have not demonstrated unexpected results across the scope of the claims.

Conclusion

6. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VISHAL VASISTH whose telephone number is (571)270-3716. The examiner can normally be reached on M-R 8:30a-5:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VVV

/Ellen M McAvoy/
Primary Examiner, Art Unit 1797